WHAT IS CLAIMED IS:

1. A method for producing a cholesteric liquid crystal color filter, the method comprising the steps of:

(a) forming a liquid crystal layer comprising a cholesteric liquid crystal composition that contains at least a liquid crystal compound, a photoreactive chiral dopant, and a polymerization initiator;

(b) forming pixels at the liquid crystal layer; and

(c) either before or after the step of forming pixels, forming partition walls at portions corresponding to a boundary of each of the pixels, by irradiating the portions through a mask with ultraviolet light at a wavelength to which the polymerization initiator is photosensitive.

2. The method for producing a cholesteric liquid crystal color filter according to claim 1, wherein the cholesteric liquid crystal composition comprises a nematic liquid crystal compound in an amount of 30 to 98 % by mass relative to the mass of solids of the liquid crystal composition.

3. The method for producing a cholesteric liquid crystal color filter according to claim 1, wherein the cholesteric liquid crystal composition comprises the photoreactive chiral dopant in an amount of 2 to 30 % by mass relative to the mass of solids of the liquid crystal composition.

4. The method for producing a cholesteric liquid crystal color

filter according to claim 1, wherein the cholesteric liquid crystal composition comprises the polymerization initiator in an amount of 0.1 to 20 % by mass relative to the mass of solids of the liquid crystal composition.

5. The method for producing a cholesteric liquid crystal color filter according to claim 1, wherein the cholesteric liquid crystal composition comprises a polymerizable monomer in an amount of 0.5 to 50 % by mass relative to the mass of solids of the liquid crystal composition.

6. The method for producing a cholesteric liquid crystal color filter according to claim 1, wherein the cholesteric liquid crystal composition comprises a binder resin in an amount of at most 50 % by mass relative to the mass of solids of the liquid crystal composition.

7. The method for producing a cholesteric liquid crystal color filter according to claim 6, wherein the binder resin is a binder resin having a carboxyl group at a side chain.

8. The method for producing a cholesteric liquid crystal color filter according to claim 1, wherein a surfactant is incorporated in the liquid crystal layer in an amount of 0.001 to 5 % by mass.

9. The method for producing a cholesteric liquid crystal color

filter according to claim 8, wherein the surfactant is a nonionic surfactant.

10. A method for producing a cholesteric liquid crystal color filter, the method comprising the steps of:

(a) forming a liquid crystal layer comprising a cholesteric liquid crystal composition that contains at least a liquid crystal compound, a photoreactive chiral dopant, and a polymerization initiator;

(b) while the liquid crystal layer is in an amorphous solid state or a microcrystalline state, forming partition walls at portions corresponding to a boundary of each of pixels to be formed, by irradiating the portions through a mask with ultraviolet light at a wavelength to which the polymerization initiator is photosensitive; and thereafter

(c) forming the pixels.

11. The method for producing a cholesteric liquid crystal color filter according to claim 10, wherein a surfactant is incorporated in the liquid crystal layer in an amount of 0.001 to 5 % by mass.

12. The method for producing a cholesteric liquid crystal color filter according to claim 11, wherein the surfactant is a nonionic surfactant.

13. The method for producing a cholesteric liquid crystal color filter according to claim 10, wherein the step (c) comprises the sub-steps

of:

patterning by image-wise exposure using a first light, to which the photoreactive chiral dopant is highly photosensitive; and

fixing a helical structure of the liquid crystal compound to selectively reflect a desired color of light by performing photopolymerization curing using a second light, to which the polymerization initiator is highly photosensitive.

14. The method for producing a cholesteric liquid crystal color filter according to claim 13, wherein the photoreactive chiral dopant has a peak photosensitive wavelength at a longer wavelength side relative to a peak photosensitivity wavelength of the polymerization initiator.

15. The method for producing a cholesteric liquid crystal color filter according to claim 10, wherein the step (c) comprises transforming the liquid crystal layer into a liquid crystalline phase.

16. A method for producing a cholesteric liquid crystal color filter, the method comprising the steps of:

(a) forming a liquid crystal layer comprising a cholesteric liquid crystal composition that contains at least a liquid crystal compound, a photoreactive chiral dopant, and a polymerization initiator;

(b) forming pixels while the liquid crystal layer is in an amorphous solid state or a microcrystalline state; and thereafter

(c) forming partition walls at portions corresponding to a

boundary of each of the pixels, by irradiating the portions through a mask with ultraviolet light at a wavelength to which the polymerization initiator is photosensitive.

17. The method for producing a cholesteric liquid crystal color filter according to claim 16, wherein a surfactant is incorporated in the liquid crystal layer in an amount of 0.001 to 5 % by mass.

18. The method for producing a cholesteric liquid crystal color filter according to claim 17, wherein the surfactant is a nonionic surfactant.

19. The method for producing a cholesteric liquid crystal color filter according to claim 16, wherein the step (b) comprises the sub-steps of:

patterning by image-wise exposure using a first light, to which the photoreactive chiral dopant is highly photosensitive; and

fixing a helical structure of the liquid crystal compound to selectively reflect a desired color of light by performing photopolymerization curing using a second light, to which the polymerization initiator is highly photosensitive.

20. The method for producing a cholesteric liquid crystal color filter according to claim 19, wherein the photoreactive chiral dopant has a peak photosensitive wavelength at a longer wavelength side relative to a

peak photosensitivity wavelength of the polymerization initiator.